  
  
**Impossible Target for Utility Companies?**

**OXEMS Blog  
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**TRY HITTING A TARGET YOU CAN'T SEE**

Every day across the UK and around the developed world, utility company gangs are tasked with finding and identifying assets. Gas pipes, water pipes, cables, sewers and more. It’s a difficult job because they are buried out of sight and worse; if they are using GPS they have a moving target. If you don’t believe me then try this…

**WHERE ARE YOU?**

Here’s a little test you can run which demonstrates how GPS satellites can move the goalposts for utilities’ gangs. Put your smart phone onto maps and give it a few moments to work out where you are. Soon it will come up with a map and a circle, and the centre of the circle marks your position according to the satellite triangulation. If you are a utilities company gang, that may mark the position of where you will dig to reach a buried asset. But wait a minute…

**HOW GPS MOVES THE GOALPOSTS**

First of all you might notice that the circle begins to vary in size even though there is already an inbuilt inaccuracy in the measurement represented by the size of the circle. If you stand absolutely still, that circle will get bigger and smaller, and the dot will move to the centre of the circle and the position of the circle itself will move. Last time I ran this test I watched as the circle started about 50 metres in front of me, then steadily moved towards me until it got about 10 metres away from me but then suddenly shot off to the side and went about 50 metres in the other direction! I was relieved that I was just passing time before going into a meeting, not trying to work out where to start digging.

**HOW TO GET 100% ACCURACY**

The circle moves because the satellite data is changing. The amount and accuracy of the information being gathered constantly varies, and therefore so does the outcome of the calculation. It’s why some utility companies end up paying a premium for high-end GPS systems. And it’s why others stick with standard GPS to get close but then switch to OXEMS technology to not only get centimeter perfect but to also accurately identify each asset.

OXEMS technology pinpoints underground assets simply and accurately every time.

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